



Complete Summary

GUIDELINE TITLE

Report on varicocele and infertility.

BIBLIOGRAPHIC SOURCE(S)

American Urological Association (AUA), American Society for Reproductive Medicine (ASRM). Report on varicocele and infertility. Baltimore (MD): American Urological Association, Inc.; 2001 Apr. 9 p. [15 references]

COMPLETE SUMMARY CONTENT

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INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT

CATEGORIES

IDENTIFYING INFORMATION AND AVAILABILITY

SCOPE

DISEASE/CONDITION(S)

- Varicocele
- Male infertility

GUIDELINE CATEGORY

Diagnosis
Evaluation
Treatment

CLINICAL SPECIALTY

Endocrinology
Family Practice
Internal Medicine
Obstetrics and Gynecology
Urology

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

To offer recommendations regarding best practice policies for evaluation and treatment of varicoceles

TARGET POPULATION

Men with varicocele(s)

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis

1. Medical and reproductive history
2. Physical examination performed with patient in both the recumbent and upright positions
3. At least two semen analyses
4. Scrotal ultrasonography
5. Spermatic venography

Treatment

1. Surgical varicocele repair, including retroperitoneal, inguinal, subinguinal, or laparoscopic methods
2. Percutaneous embolization of the refluxing internal spermatic vein(s)

Assisted Reproductive Techniques (used when female factors are also present)

1. Intrauterine insemination
2. In vitro fertilization/intracytoplasmic sperm injection

MAJOR OUTCOMES CONSIDERED

- Testis volume and semen parameters
- Conception rates
- Pregnancy rates

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

This guideline document was submitted for peer review by 125 physicians and researchers from the disciplines of urology, gynecology, reproductive endocrinology, primary care and family medicine, andrology and reproductive laboratory medicine. Modifications were made by the Practice Committee of the

American Society of Reproductive Medicine. After the final revisions were made based upon the peer review process and the Practice Committee of the American Society of Reproductive Medicine, the documents were submitted to, and approved by the Board of Directors of the American Urological Association and the Board of Directors of the American Society of Reproductive Medicine.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Excerpted by the National Guideline Clearinghouse (NGC)

Detection of Varicoceles

Routine evaluation of infertile men with varicoceles should include a medical and reproductive history, physical examination and a minimum of two semen analyses. Imaging studies are not indicated for the standard evaluation unless physical exam is inconclusive.

Indications for Treatment of a Varicocele

Varicocele treatment should be offered to the male partner of a couple attempting to conceive, when all of the following are present:

1. A varicocele is palpable
2. The couple has documented infertility
3. The female has normal fertility or potentially correctable infertility
4. The male partner has one or more abnormal semen parameters or sperm function test results

Adult men who have a palpable varicocele and abnormal semen analyses but are not currently attempting to conceive should also be offered varicocele repair.

Young men who have a varicocele and normal semen analyses should be followed with semen analyses every one to two years.

Adolescents who have a varicocele and objective evidence of reduced ipsilateral testicular size should be offered varicocele repair. Adolescents who have a varicocele but normal ipsilateral testicular size should be offered follow-up monitoring with annual objective measurements of testicular size and/or semen analyses.

Varicocele Treatment, Intrauterine Insemination, and Assisted Reproduction

Varicocele repair may be considered as the primary treatment option when a man with a varicocele has suboptimal semen quality and a normal female partner. In vitro fertilization with or without intracytoplasmic sperm injection may be considered the primary treatment option when there is an independent need for

such techniques to treat a female factor, regardless of the presence of varicocele and suboptimal semen quality.

Treatment of Varicoceles

The treating physician's experience and expertise, together with the options available, should determine the choice of varicocele treatment.

Follow-up

Persistence or recurrence of a varicocele may be treated by either surgical ligation or percutaneous embolization of the refluxing veins.

After treatment of a varicocele, semen analysis should be done at approximately three-month intervals for at least one year or until pregnancy occurs.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Despite the absence of definitive studies on the fertility outcome of varicocele repair, varicocele treatment should be considered as a choice for appropriate infertile couples because: varicocele repair has been proven to improve semen parameters in most men; varicocele treatment may possibly improve fertility; and, the risks of varicocele treatment are small.

POTENTIAL HARMS

The potential complications of varicocele repair occur infrequently and are usually mild. All approaches to varicocele surgery are associated with a small risk of wound infection, hydrocele, persistence or recurrence of varicocele and, rarely, testicular atrophy. Potential complications from an inguinal incision for varicocele repair include scrotal numbness and prolonged pain. Laparoscopic surgical repair of varicoceles carries a risk of major intraperitoneal complications, such as injury to bowel, bladder, and major blood vessels.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

This report is intended to provide medical practitioners with a consensus of principles and strategies for the care of couples with male infertility problems. The report is based on current professional literature, clinical experience and expert opinion. It does not establish a fixed set of rules or define the legal standard of care and it does not pre-empt physician judgment in individual cases. Physician judgment must take into account variations in resources and in patient needs and preferences. Conformance with this Best Practice Policy cannot ensure a successful result.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

American Urological Association (AUA), American Society for Reproductive Medicine (ASRM). Report on varicocele and infertility. Baltimore (MD): American Urological Association, Inc.; 2001 Apr. 9 p. [15 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2001 Apr

GUIDELINE DEVELOPER(S)

American Society for Reproductive Medicine - Private Nonprofit Organization
American Urological Association, Inc. - Medical Specialty Society

GUIDELINE DEVELOPER COMMENT

This document was written by the Male Infertility Best Practice Policy Committee of the American Urological Association, Inc. (AUA) and the Practice Committee of the American Society for Reproductive Medicine (ASRM). The two organizations agreed to collaborate to prepare documents of importance in the field of male infertility. The Male Infertility Best Practice Policy Committee was created in 1999 by the Board of Directors of the American Urological Association, Inc.®

SOURCE(S) OF FUNDING

American Urological Association, Inc. (AUA)

GUIDELINE COMMITTEE

Male Infertility Best Practice Policy Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Committee Members: Ira D. Sharlip, M.D. (Co-Chair); Jonathan Jarow, M.D. (Co-Chair); Arnold M. Belker, M.D.; Marian Damewood, M.D.; Stuart S. Howards, M.D.; Larry I. Lipshultz, M.D.; Ajay Nehra, M.D.; James W. Overstreet, M.D., Ph.D.; Richard Sadovsky, M.D.; Peter Niles Schlegel, M.D.; Mark Sigman, M.D.; Anthony J. Thomas, Jr., M.D.

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Committee members received no remuneration for their work. Each member of the Committee provided a conflict of interest disclosure to the American Urology Association (AUA).

GUIDELINE STATUS

This is the current release of the guideline.

An update is not in progress at this time.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the [American Urological Association, Inc. \(AUA\) Web site](#).

Print copies: Available from the American Urological Association, Inc., 1000 Corporate Boulevard, Linthicum, MD 21090.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

The following are available for physicians to distribute to patients:

- A basic guide to male infertility. How to find out what's wrong. Baltimore (MD): American Urological Association, Inc, 2001. Available in Portable Document Format (PDF) from the [American Urological Association, Inc. \(AUA\) Web site](#).
- A basic guide to male infertility. Answers to your questions about varicoceles. Baltimore (MD): American Urological Association, Inc., 2001. 12 p. Electronic copies: Available in Portable Document Format (PDF) from the [American Urological Association, Inc. \(AUA\) Web site](#).

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI on November 7, 2001. The information was verified by the guideline developer as of December 24, 2001.

COPYRIGHT STATEMENT

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